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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/665,726

09/18/2003

Foster D. Hinshaw

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08/29/2006

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.  
530 VIRGINIA ROAD  
P.O. BOX 9133  
CONCORD, MA 01742-9133

EXAMINER

PHAM, KHANH B

ART UNIT

PAPER NUMBER

2166

DATE MAILED: 08/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/665,726	<b>Applicant(s)</b> HINSHAW ET AL.	
	<b>Examiner</b> Khanh B. Pham	<b>Art Unit</b> 2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/18/03, 3/15/04, 6/23/04, 5/26/06</u> | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "20" has been used to designate both "Local APP" and "JPU22". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "load balancing function 11" at page 12, line 4. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application.

### ***Specification***

3. The disclosure is objected to because of the following informalities: applicant is required to amend the specification to replace attorney docket numbers with application numbers and current status for the related applications listed at pages 1, 14 and 16.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claim 1 recites the limitations "the field" in line 6 and "the field oriented data" at line 7-8. There is insufficient antecedent basis for these limitations in the claim.
- Claims 2, 6, 11, 16-20 recite "An apparatus as in claim 1." There are insufficient antecedent basis for this limitations in the claims.
- Claims 8, 10, 11, 13, 16 recite the limitation "the logic circuit". Claims 11, 16, 18 further recites "the external central processing unit." There is insufficient antecedent basis for these limitations in the claims.
- Regarding claim 19, the phrase "and other numeric fields" renders the claim indefinite because the claim includes elements not actually disclosed (those encompassed by "other numeric fields", thereby rendering the scope of the claim unascertainable. See MPEP § 2173.05(d).

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. **Claims 1-4 and 6-21** are rejected under 35 U.S.C. 102(e) as being anticipated by Sarkissian et al. (US 6,789,116 B1), hereinafter "Sarkissian"

**As per claims 1, 21**, Sarkissian teaches a programmable pipeline processor for processing streaming input data (Col. 3 lines 30-40) comprising:

- "an interface (Fig. 11, 1101) for receiving field-delineated data from a field parser (Fig. 3, 301), the field parser connected to par non-field delineated data from a streaming data source into the field-delineated data, under instruction from an external processing unit" at Col. 8 line 55 to Col. 9 line 20 and Figs. 3, 11;
- "a field buffer that stores the field" at Col. 10 lines 45-54 and Fig. 11, 1103;
- "at least one logic unit that performs at least one field operation on the field oriented data" at Col. 10 lines 55-65 and Fig. 3, 303.

**As per claim 2**, Sarkissian teaches the processor of claim 1 further comprising "a programmable memory that receives, as an address, field oriented data from the field buffer" at Col. 33 lines 40-50, "wherein the programmable memory serves as a substitution table for field data" at Col. 35 lines 45-55.

**As per claim 3**, Sarkissian teaches the processor of claim 2, wherein “the substitution table contains alternate character equivalents for a set of character data” at Col. 35 lines 45-55.

**As per claim 4**, Sarkissian teaches the processor of claim 2, wherein “the programmable memory includes multiple substitution tables that provide multiple character equivalents for a corresponding set of characters” at Col. 35 lines 45-55.

**As per claim 6**, Sarkissian teaches the processor of claim 1, further comprising “at least two temporary registers for storing field oriented data from the field buffer, prior to use of the field oriented data by the logic unit” at Col. 33 lines 25-30.

**As per claim 7**, Sarkissian teaches the processor of claim 6, wherein “a first data field is stored in a first temporary register from the field buffer, a second data field is stored into a second temporary register and the logic unit is connected to compare a third data field from the field buffer with the first data field and a fourth data field from the field buffer with the second data field” at Col. 17 lines 1-30.

**As per claim 8**, Sarkissian teaches the processor of claim 7 wherein “the logic unit compares a third data field from the field buffer with the first data field and a fourth data field from the field buffer with the second field in two instructions” at Col. 22 lines 40-50.

**As per claim 9**, Sarkissian teaches the processor as in claim 6, wherein “a first data field is stored in a first temporary register from the field buffer; a second data field is stored into a second temporary register; and the logic unit is connected to compare a third data field from the field buffer with the first data field and with the second data field” at Col. 17 lines 1-30.

**As per claim 10**, Sarkissian teaches the processor as in claim 9, wherein “the logic unit compares a third data field from the field buffer with the first data field and with the second field in a single instruction” at Col. 39 lines 45-65.

**As per claim 11**, Sarkissian teaches the processor as in claim 1 further comprising “a data string register that stores data received from the external central processing unit to be used as an operand by the logic unit” at Col. 24 lines 12-20.

**As per claim 12**, Sarkissian teaches the processor of claim 11, wherein “at least one pointer specifies a location in the data string register to be used as the operand” at Col. 32 lines 20-40.

**As per claim 13**, Sarkissian teaches the processor as in claim 12 wherein “the logic unit is connected to compare a data field from the field buffer with a data field from the data string register as specified by a first pointer” at Col. 33 lines 25-50.

**As per claim 14**, Sarkissian teaches the processor as in claim 13 wherein “the data field from the field buffer is simultaneously compared with a second data field from the data string register specified by a second pointer” at Col. 33 lines 25-50.

**As per claim 15**, Sarkissian teaches the processor as in claim 11 wherein “at least one logic unit performs a bit vector join operation using an operand from the data

string register to determine the presence or absence of a particular field value in the field oriented data” at Col. 4 lines 1-15.

**As per claim 16**, Sarkissian teaches the processor as in claim 1 further comprising:

- “a data string register that stores data received from the external central processing unit to be used as an operand by the logic circuit” at Col. 32 lines 20-40;
- “a temporary register for storing field oriented data from the field buffer, prior to use of the field oriented data by the logic unit” at Col. 33 lines 25-50;
- “wherein an operand can originate from either the data string register of the temporary register” at Col. 33 lines 25-50.

**As per claim 17**, Sarkissian teaches the processor as in claim 1, wherein “a field buffer location is reused when the streaming data source is paused” at Col. 33 line 59 to Col. 34 line 15.

**As per claim 18**, Sarkissian teaches the processor as in claim 1 further comprising “a data string register that stores two or more operands received from the external central processing unit” at Col. 33 line 59 to Col. 34 line 15.

**As per claim 19**, Sarkissian teaches the processor as in claim 1 wherein “the logic unit handles numeric data sign operations selected from the group consisting of floating point, integer and other numeric fields” at Figs. 20-21.



**As per claim 20**, Sarkissian teaches the processor as in claim 1 wherein "the logic unit performs two or more filter operations in a single instruction" at Col. 40 lines 30-45.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. **Claim 5** is rejected under 35 U.S.C. 103(a) as being unpatentable over Sarkissian as applied to claims 1-4 and 6-21 above, and in view of Bauer (US 2002/0052749 A1), hereinafter "**Bauer**".

**As per claim 5**, Sarkissian teaches the processor of claim 2 discussed above. Sarkissian does not explicitly teaches: "the substitution table is used to map uppercase letters to their lowercase equivalents for substitution". However, Bauer teaches a method for case conversion using a table at page 3. [0036]. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Bauer with Sarkissian's teaching in order to allow comparison of strings in both uppercase and lowercase to identify matching strings.

***Conclusion***

10. The prior art made of record, listed on form PTO-892, and not relied upon, if any, is considered pertinent to applicant's disclosure.

If a reference indicated as being mailed on PTO-FORM 892 has not been enclosed in this action, please contact Lisa Craney whose telephone number is **(571) 272-3574** for faster service.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh B. Pham whose telephone number is (571) 272-4116. The examiner can normally be reached on Monday through Friday 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on (571) 272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Khanh B. Pham  
Examiner  
Art Unit 2166

August 9, 2006.

A handwritten signature in black ink, appearing to read "Kpham", with a long horizontal flourish extending to the right.